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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,325

03/10/2008

Martin Ehlich

60291.000050

2692

21967 7590 05/25/2010

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EXAMINER

LUO, DAVID S

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

05/25/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,325	<b>Applicant(s)</b> EHLICH ET AL.	
	<b>Examiner</b> DAVID S. LUO	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 6, 16, 17, 24, 34-35, 37-40, 46-47, 56-57, 64 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7-15, 18-23, 25-29, 41-45, 48-55, 58-63 and 65-73 is/are allowed.
- 6) ☒ Claim(s) 30, 31 and 33 is/are rejected.
- 7) ☒ Claim(s) 32, 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/24/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The drawings are objected to as fig. 1 – fig. 5c contains handwritten labels. Formal drawings are required in reply to this Office action. Appropriate correction is required.
2. The Oath/Declaration is objected to as it is not properly signed by the inventors.
3. Claims 6, 16, 17, 24, 34-35, 37-40, 46-47, 56-57, 64 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend from any other multiple dependent claim. Accordingly, the claims 6, 16, 17, 24, 34-35, 37-40, 46-47, 56-57 and 64 have not been further treated on the merits. Thus, they are withdrawn from consideration.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 30-31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,774,664 to Godbersen.

As to claim 30, Godbersen teaches a machine (Godbersen figs. 5-6, col. 8: lines 7—col. 9: lines 21) being activatable by a converter with actuating signals for several electric phases (Godbersen fig. 5: “8 – inverter”, “1 – three phase asynchronous machine”); wherein the machine connected to the converter is acted upon by a plurality of polyphase test signals via a

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polyphase electric winding of the machine at a plurality of stator angles, with substantially no movement of the rotor (Godbersen col. 2: lines 35-40 “ ... while being acted upon by non-rotating field ...” and col. 2: lines 41-53); a measuring value is determined from the measured causal consequences of a respective polyphase test signal at a respective angular stator position of the stator of the connected polyphase machine (Godbersen col. 2: lines 41-53); a plurality of measuring values determined in this fashion establish a comparison function (Godbersen figs. 1-2, col. 3: lines 59 – col. 5: lines 67 where a method is taught to calculate the motor equivalent circuit parameters based on the measured values).

Godbersen does not specifically teach a process for preparing a recognition of a type of a connected polyphase machine as a machine with a rotor and a stator in order to prepare a determination of the type of the connected machine.

At the time of invention it would have been obvious to a person of ordinary skill in the art to modify the teachings of Godbersen in order to obtain the invention as disclosed in claim 30.

The motivation for this comes from the fact that Godbersen teaches a method to calculate the motor equivalent circuit parameters based on the measured values. It is also common knowledge in the motor control art that different types of motors have different motor equivalent circuit parameters. Thus, one of ordinary skill in the art is able to achieve the predictable result of recognizing a type of motor based on the motor equivalent circuit parameters.

As to claim 31, Godbersen teaches a process according to claim 30, wherein the causal consequence of a respective test signal at a respective stator angle are current values and a

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measuring value determined therefrom is a respective resistance or impedance value at a respective angular stator position (Godbersen col. 2: lines 35 – col. 3: lines 28).

As to claim 33, Godbersen teaches a process according to claim 1 or claim 30, wherein the at least first test signal and all further test signals in a three-phase system of a three-phase current are given (Godbersen fig. 6: “13 – current measuring device”, “ $I_a$ ,  $I_b$ ,  $I_c$ ”).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 7,184,902 to El-Ibiary discloses a motor parameter estimation method and apparatus;

USPN 5,998,958 to Lee discloses a method for estimating resistance values of motor stator and rotor.

### *Allowable Subject Matter*

7. Claims 32, 36 are objected to as being dependent upon the rejected base claim 30, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

8. Claims 1-5, 7-15, 18-23, 25-29, 41-45, 48-55, 58-63, 65-73 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

The art of record does not suggest the respective claim combinations together and the respective claim combinations are not obvious:

As per independent claim 1: A process for the recognition of a polyphase machine connected to a converter which comprises a stator and a rotor, in particular prior to an active

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productive operation of the machine, with the following steps of the process (a) connecting of the polyphase machine with its several electric phases to the converter; (b) supplying of a first test signal from the converter to at least one, preferably a few of the several electric phases of the connected polyphase machine; (c) measuring of at least one causal consequence of the first test signal; (d) evaluating of the measured result as a causal consequence in order to obtain a first measuring value; (e) repeating of at least once steps (b) to (d) for at least one further test signal in order to obtain at least one further causal consequence and at least one further measuring value; (f) allocating of these two measuring values to a comparison function; (g) comparing of the comparison function with at least one of several reference functions, each of which representing one type of a polyphase machine, in particular two reference function not representing the same type of machines, in order to select the reference function which is most similar to the reference function; (h) stipulating of one of several available system programs in a control of the converter by means of the selected reference function; to adapt the converter to the machine to be activated by it.

As per independent claim 41: It is the same reason as claim 1.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Luo whose telephone number is (571)270-5251. The examiner can normally be reached on M-F 9AM-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571)272-2227. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D.L./

David Luo

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/BENTSU RO/

Primary Examiner, Art Unit 2837